

09/651382

METHOD OF ENABLING LOW TIER LOCATION APPLICATIONS

ABSTRACT OF THE DISCLOSURE

In a wireless communication network having remote receivers
5 (subscriber units) communicating through base units in a service area, each of
the base units servicing a cell area encompasses one or more identifiable
zones which can be occupied by receivers. According to the invention, at
least one measure of the spatial size of the cell is reported to a receiver
communicating with a base station, for use in location specific applications.

10 The measure can be a size category, an average diameter or another measure,
such as a shape and orientation of the cell, a boundary apex, and a boundary
line of the cell. The base station coordinates are conventionally available to
the receiver. By providing a measure of size, the receiver can resolve its zone
or location to a coarse or low level of resolution. The zone occupied by the
15 receiver is at least within the cell and the size of the cell and location of the
base station are now known. According to additional embodiments, the
resolved zone known to be occupied by the receiver is refined to an area
within the defined cell area. The size of the cell or service area of the location
transmitter can be appended to the identification code of the base station.

20 Reporting the cell size and location is sufficient to facilitate some location
applications in the receiver, and can reduce or eliminate reliance on satellite
and other positioning systems, particularly if the zone initially defined as the
cell size is resolved further, for example using time-of-arrival, power level,
angular bearing and similar techniques.